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Inspection Procedures for Filter Self-rescuers and Self-contained Self-rescuers

PREFACE

Inspection Procedures Handbook For
Filter Self-Rescuers (FSRs) and
Self-Contained Self-Rescuers (SCSRs)

This handbook sets forth procedures for all Coal Mine Safety and Health (CMS&H) enforcement personnel to follow when conducting inspection activities at underground mines to ensure that all FSR and SCSR devices meet the regulatory and policy requirements for approval, use, location, inspection, testing, maintenance, repair, and recordkeeping. Previously issued procedural and administrative instructions for this subject material are superseded by this handbook.

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Date

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COAL FSR/SCSR INSPECTION PROCEDURES HANDBOOK

CHAPTER 1

Service-Life Periods for FSR and SCSR Devices

I. Service Life Periods. Each CMS&H District should implement inspection procedures for evaluation of the approved service life periods for all FSRs and SCSRs at each underground mine. Once the initial evaluation has been conducted, follow-up evaluations are only required when the devices at the mine have exceeded their approved service life periods or the mine operator has obtained additional devices.

The manufacturer's service life periods and conditions of use requirements for FSR and SCSR devices are approved by MSHA and the National Institute for Occupational Safety and Health (NIOSH) as a part of the product approval. The service life periods can be determined by using:

a. the manufacturer's approved manual for the device being examined; or

b. Appendix A, entitled "Self-Rescuer Service Life Plans and Conditions of Use Requirements".

The requirements listed in the manufacturer's approved manual and those listed in Appendix A should agree. Differences should be resolved by contacting MSHA's Approval and Certification Center at (304) 547-0400 before any enforcement action is taken.

Some of the manufacturer's approved service life plans contain different service life periods for carried or stored units. Therefore, for inspection purposes, the inspector must determine whether the units are considered carried or stored in accordance with the manufacturer's specifications in order to determine the service life expiration date for the devices.

II. Violations of Service Life Periods. If a determination is made that the mine operator has FSR or SCSR devices at the mine that have exceeded the manufacturer's approved service life period, the inspector should take appropriate enforcement action by citing 75.1714(a) to ensure the devices are replaced as soon as possible. The body of the citation should include the following:

a. the serial number and expiration date of all FSR or SCSR devices identified at the mine that were determined to have exceeded the manufacturer's approved service life period; and

b. a statement that since these devices have exceeded the manufacturer's approved service life period, they are not considered approved devices and arrangements must be made to replace or refurbish these devices as soon as possible.

If the mine operator has a valid purchase order or other reliable evidence showing replacement devices have been ordered or arrangements have been made for refurbishment of these devices, the inspector should fix the abatement period to correspond to the proposed delivery date shown on the purchase order or within 90 days of the citation issue date, whichever is less. Inspectors should obtain a copy of any evidence that was used in making this determination.

If the mine operator cannot furnish evidence of the replacement or refurbishment of an appropriate number of FSR or SCSR devices, the abatement period should be limited to the length of time that it would take an operator to obtain a valid purchase order (approximately 1 week).

If at the end of the abatement period the mine operator has obtained a valid purchase order or other reliable evidence that such devices are scheduled to be replaced or refurbished, the citation should be extended to reflect the proposed delivery date in the purchase order or within 90 days of the issue date of the citation, whichever is less. Inspectors should obtain a copy of any evidence that was used in making this determination.

If at the end of the abatement period the mine operator has not obtained a valid purchase order, or received and placed approved devices in service, the citation should not be extended and the inspector should issue a Section 104(b) order with no area affected. The inspector should document in the body of the order that the mine operator failed to take appropriate action to provide the miners with approved FSR or SCSR devices within a reasonable period of time. The mine operator should be informed that MSHA will seek to obtain the maximum civil penalty for the original citation for every day that the order goes unabated.

If, after the order is issued the mine operator obtains a valid purchase order, the inspector shall obtain a copy of the purchase order, terminate the order to reflect that the operator has taken appropriate steps to provide the needed FSRs or SCSRs, and extend the termination date in the original citation to reflect the expected delivery date shown in the

purchase order. This date should not exceed 90 days. The maximum penalty for the citation will no longer apply.

A. Gravity Determinations. Inspectors should consider the following factors in making gravity determinations.

1. Likelihood of an injury or illness occurring: What is the potential for a fire, explosion, or inundation. Was area well rock dusted? Was equipment well maintained and free of combustible material? What were the methane levels? Was there any danger of mining into old works or under a body of water? Any of these conditions would increase the likelihood of an injury or illness occurring.

2. Injury or illness could reasonably be expected to be: What is the probability of a miner being able to escape the mine if an accident did occur and the miners did not have access to an FSR or SCSR that worked properly? What distance would the miners have to travel to reach fresh air or a storage cache of other devices? A distance that would require more than 10 minutes for a miner to reach another device could reasonably be expected to result in a lost time injury or illness.

3. Significant and Substantial (S&S): If a determination was made that an injury or illness was reasonably likely and there was a potential for lost workdays, the inspector should consider marking the citation S&S.

4. Number of Persons Affected: If the device was carried by a miner, consider that miner as affected. However, if the device was stored, all miners who would likely rely on the use of that device, should be considered as affected.

B. Negligence Determination. Inspectors should consider the following.

1. Has the device been in service more than 90 days since the service life expired? If so, high negligence should be considered.

2. Has the mine operator attempted to purchase replacement devices prior to the expiration of the service life period? If not, high negligence should be considered.

The circumstances surrounding the gravity and negligence of the citation should be documented in the inspector's notes.

C. Violation Follow-Ups. Enforcement of the manufacturer's approved service life periods does not mean that the devices cited may not perform as designed. Therefore, it is not necessary that these devices be removed from service immediately. However, the mine operator must replace or refurbish these devices as soon as possible. Accordingly, each district shall conduct follow-up inspections. The follow-up inspections should be scheduled to coincide as closely as possible with the established abatement period. The follow-up inspections will help ensure mine operators are receiving the new or refurbished devices and placing them in service in a timely manner. If the mine operator has not taken delivery of the devices within the abatement period, the operator must have written information from the manufacturer showing that the devices were not available and that a new delivery date has been established. Inspectors should obtain a copy of any evidence that was used in making this determination.

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CHAPTER 2

Daily Examinations, 90-day Inspections and Conditions of Use Requirements for FSR and SCSR Devices

I. Evaluation of Mine Operator Examinations. Each CMS&H District should implement inspection procedures that require a quarterly evaluation of the mine operator's daily examinations, 90-day inspections and conditions of use requirements for FSR and SCSR devices. Procedures should include a provision for the physical evaluation of a representative number of the FSR or SCSR devices at each underground mine.

A. Daily Examinations. All FSR and SCSR devices that are carried are required to be examined prior to each shift of use by a person who has been trained to perform such work. Some manufacturers consider devices carried unless the devices are stored in accordance with the manufacturer's specifications. The inspector must determine which devices are considered carried in order to evaluate the mine operator's compliance. If a determination is made that the mine operator failed to maintain a device in good condition or failed to perform the required daily examination of a device, the inspector should take appropriate enforcement action by citing 75.1714-3(a) or (b), whichever is appropriate.

B. 90-Day Inspections. All FSR and SCSR devices are required to be inspected every 90-days by a person who has been trained to perform such work. The inspector should evaluate the operator's 90-day inspection procedures, if possible, to determine if the operator is complying with the manufacturer's approved instructions for the 90-day inspection. Although mine operators are not required to keep a record of the 90-day inspection, coal mine operators must certify by signature and date that the 90-day inspections were made. When a determination is made that the mine operator failed to conduct the 90-day inspection of the devices in accordance with the manufacturer's approved instructions, the inspector should take appropriate enforcement action by citing 75.1714-3(c) or (d), whichever is appropriate.

C. Condition of Use Requirements. FSRs and SCSRs may not perform as designed if they are not used, located, inspected, tested, maintained, and repaired in accordance with the manufacturer's approved instructions for conditions of use, and the mine operator's approved SCSR storage plan. Therefore, such devices shall be removed from service immediately. Some devices may be inspected, relocated, and returned to service, while others may need to be replaced because of defects that may affect their ability to perform as designed.

If it is necessary to remove defective devices from service, the inspector must determine the effect this would have on the miners. If removing these devices from service would mean that the miners would not be provided with adequate self-rescuer protection, the inspector should notify the operator that all miners must be provided with adequate protection or the operator may be subject to additional enforcement action.

Some manufacturer's approved service life plans and conditions of use requirements contain specific information pertaining to conditions affecting the use, location, inspection, testing, maintenance, repair, and recordkeeping of the various FSRs and SCSRs. Therefore, inspectors must familiarize themselves with the specific requirements for the FSRs and SCSRs at the mine in order to determine if the devices meet the requirements of the manufacturer's approved instructions for conditions of use and the mine operator's approved SCSR storage plan.

The manufacturer's requirements for the daily examinations, 90-day inspections, definition of carried devices, and the manufacturer's approved instructions for conditions of use can be determined by using:

a. the manufacturer's approved manual for the device being examined; or

b. Appendix A, entitled "Self-Rescuer Service Life Plans and Conditions of Use Requirements".

The requirements listed in the manufacturer's approved manual and those listed in Appendix A should agree. Differences should be resolved by contacting MSHA's Approval and Certification Center at (304) 547-0400 before any enforcement action is taken.

II. Violations of Daily and 90 Inspection Procedures and Condition of Use Requirements. If a determination is made that the mine operator has FSR or SCSR devices at the mine that are not used, located, inspected, tested, maintained, or repaired as required by the manufacturer's approved instructions for conditions of use, the inspector shall take appropriate enforcement action to protect the miners by citing 75.1714-3. If a determination is made that the mine operator is not complying with a provision of the approved SCSR storage plan, the inspector shall take appropriate enforcement action by citing 75.1101-23. The body of the citation should include the following:

a. the type and serial number of the defective devices to be removed from service;

b. the condition that led to the citation, such as: the devices were not used, located, inspected, tested, maintained, or repaired, as required by the operator's approved storage plan or the manufacturer's approved instructions for conditions of use;

c. the action that must be taken by the operator to correct the condition, such as: instructing the miners in the proper use of the devices, or relocating, inspecting, testing, maintaining or repairing the devices before placing them back into service; Note: repairs can only be made by the manufacturer, of the device, or their authorized representative.

d. a statement requiring the operator to remove the defective devices from service immediately; and

e. if it is determined that the condition would require that the devices be replaced, such as missing or broken seals, color indicator indicating moisture, punctures in the case, or large dents affecting the seal, etc., a statement reminding the operator of the requirement that all miners be provided with adequate self-rescuer protection at all times while they are underground.

The abatement period should be limited to the length of time necessary for the operator to remove the defective devices from service.

III. Failure to Abate.If at the end of the abatement period, the mine operator has not corrected the condition that resulted in the citation or provided the miners with adequate self-rescuer protection, the citation should not be extended and the inspector should issue a Section 104(b) order. The area affected will depend on the location of the devices determined to be defective. The body of the order should include a statement that:

a. the operator failed to take the appropriate action to remove or replace the defective devices within a reasonable period of time;

b. the operator failed to provide the miners with adequate self-rescuer protection; and

c. continued noncompliance with the order may subject the operator to a violation of Section 108(a)(1)(A) of the Federal Mine Safety and Health Act of 1977 for working in the face of a closure order.

A Section 104(b) order should not be modified to allow for the continued use of devices that failed to meet the manufacturer's approved instructions for conditions of use.

A. Gravity Determinations. Inspectors should consider the following factors in making gravity determinations.

1. Likelihood of an injury or illness occurring: What is the potential for a fire, explosion, or inundation. Was area well rock dusted? Was equipment well maintained and free of combustible material? What were the methane levels? Was there any danger of mining into old works or under a body of water? Any of these conditions would increase the likelihood of an injury or illness occurring.

2. Injury or illness could reasonably be expected to be: What is the probability of a miner being able to escape the mine if an accident did occur and the miners did not have access to an FSR or SCSR that worked properly? What distance would the miners have to travel to reach fresh air or a storage cache of other devices? A distance that would require more than 10 minutes for a miner to reach another device could reasonably be expected to result in a lost time injury or illness.

3. Significant and Substantial (S&S): If a determination was made that an injury or illness was reasonably likely and there was a potential for lost workdays, the inspector should consider marking the citation S&S.

4. Number of Persons Affected: If the device was carried by a miner, consider that miner as affected. However, if the device was stored, all miners likely to rely on the use of that device, should be considered as affected.

B. Negligence Determination. Inspectors should consider the following.

1. Was a daily examination made of the device prior to the device being placed in service? If not, high negligence should be considered.

2. Does the mine operator have a program in place to make the daily examination of the devices? If not, high negligence should be considered.

3. Should the problem have been identified during the daily examination or 90-day inspection of the device? If so, check the mine operator's procedures for conducting the daily examination and 90-day inspections. If the mine operator does not have any procedures in place or the procedures do not ensure devices are replaced when they fail to meet the manufacturer's approved instructions for the daily examinations and 90-day inspections, high negligence should be considered.

   The circumstances surrounding the gravity and negligence of the citation should be documented in the inspectors' notes.

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CHAPTER 3

Review of the Mine Operator's SCSR Storage Plan

Each CMS&H District having mine operators who have approved SCSR storage plans should implement procedures for conducting an annual review of such mine operator's SCSR storage plan.

The annual review should focus on any changes at the mine that may impact the use of SCSRs and storage caches, such as:

1. an increase in methane liberation;

2. diesel equipment being used;

3. potential for breaking into oxygen-deficient atmospheres;

4. conditions or accidents that could lead to the cause and effect of fires, explosions, and inundations; and

5. whether there has been a change in mining height that would affect the amount of time that it would take to reach the storage caches.

If a determination is made that a mine operator failed to comply with any of the provisions of the approved SCSR storage plan, the inspector should take appropriate enforcement action by citing 75.1101-23.

Self-Rescuer Service Life Plans
and
Conditions of Use Requirements

Contents

NOTE: More detailed information can be obtained from the manufacturer's latest user's manual.

General Information

A. Approval Information

1. FSR stands for filter self-rescuer which is approved under Subpart I of Part 11 Title 30 CFR. FSRS are approval for escape only in areas containing carbon monoxide in otherwise breathable air. FSRS do not generate oxygen.

2. SCSR stands for a self-contained self-rescuer which is approved under Subpart H of Part 11 Title 30 CFR. SCSRs are approved for escape only from oxygen-deficient atmospheres, gases, and vapors at specified temperatures.

   SCSRs generate oxygen for escape purposes and should not be used for other reasons such as entering hazardous atmospheres or for fire fighting.

B. Duration Information

1. FSRS are approved for a minimum duration of one hour per requirements of Part 11 Title 30 CFR. The actual duration maybe longer or shorter depending upon CO concentration and other environmental or user conditions.

2. Although the SCSR devices are approved under the requirements of Part 11 Title 30 CFR for their rated duration, the actual duration that a user may obtain from a device depends on a number of factors including, but not limited to, a person's physical condition, the in-mine conditions affecting the escape route out of the mine, and the rate of travel. All persons should be advised to maintain an orderly escape (remain calm, control work rate and travel speed) to obtain the maximum duration from a device.

C. Donning Procedures

1. Donning procedures listed in this document are taken directly from approved users manuals. The 3 + 3 Donning Procedures are still applicable for SCSRs, but these procedures provide additional information.

General Inspection Procedures

1. Review the mine operator's 90-day inspection records on all FSR and SCSR devices employed at the mine.

2. Record the serial number (batch number) of any device employed at the mine that has exceeded the manufacturer's approved service life date.

3. Record the serial number (batch number) of any device employed at the mine that failed to meet the manufacturer's approved daily inspection, 90-day inspection, or conditions of use requirements.

4. Take appropriate enforcement action to ensure the devices that have exceeded the manufacturer's approved service life date, and/or failed to meet the requirements of the manufacturer's approved daily inspection, 90-day inspection, or conditions of use requirements, are removed from service. Note: Devices that have exceeded the service life date may remain in service until they can be replaced with an approved device. However, devices that fail to meet the **daily** inspection, 90-day inspection, or conditions of use requirements must be removed from service immediately.

5. During the course of the inspection, check a representative number of each type of device being employed at the mine for obvious conditions that would require the device to be removed from service immediately (e.g., moisture indicators, pressure gauges, damaged or missing seal wires, broken seals, visible case damage, and any additional restraints that may hinder the unit from being opened).

6. The temperature ranges outlined under the conditions of use requirements are specified by the manufacturer and tested under the requirements of Part 11 Title 30 CFR. Devices that have been exposed to temperatures below the manufacturer's specifications can normally be brought back to above the minimum temperature in accordance with the conditions-of-use specified in the approved user instruction manuals for self-contained self-rescuers, and placed back in service. However, the manufacturer or authorized representative should be contacted to determine if temperature may have adversely affected the device. Devices that have been stored in temperatures above the manufacturer's specifications shall be removed from service and either returned to the manufacturer or **disposed of properly.**

Chapter 1–CSE

Self-Rescuer Information Data Sheet

SELF-CONTAINED
SELF-RESCUER

Sheet 1 of 2

1. Company:	2. Model No.:	3. Approval No.:
CSE	SR-1OO	TC-13F-239

4. Daily Inspection:

Before each shift, if the unit is going to be carried, do the following:

1. Check the moisture indicators on both the top and bottom canister covers to make sure they are blue. Any white or pink color should result in the unit being removal from service.

2. Make sure the security seal is intact. If not, remove from service.

3. If the unit shows signs of physical abuse (crushed, burnt, visible holes, cracks, or dents that cause the security seal to become slack, unattached, or unfastened), remove from service.

5. 90-Day Inspection (for all units]:

Examine the SR-100 just as in the daily inspections. In addition, the unit should be removed from the carrying pouch. The unit must slip out easily for use in an emergency.

6. Conditions of Use:

1. The unit must meet the daily and W-day inspections above.

2. The unit itself should not be less than 32°F. If the SR-1OO is removed from service because the unit's internal temperature is below 32°F, it can be returned to service once its temperature is 32°F or higher.

3. The unit should not be exposed to temperatures above 130°F. If the temperature goes above 130°F it should be removed from service and discarded.

4. The unit should be used for escape only.

5. Units manufactured prior to May 1992 were required to be retrofitted. The retrofitted units are easily identified. All retrofitted units have a moisture indicator on both the top and bottom canister covers. Units that have not been retrofitted only have a moisture indicator on the top canister cover. Any unit in service after January 1, 1994, that has not been retrofitted should be removed from service.

Continuation Sheet

SCSR CSE SR-1OO	Sheet 2 of 2

7. Service Life Plan:

Five years from the date of manufacture with no service life extensions. The date of manufacture is permanently stamped on the security band. To determine the expiration date, simply add five years to the stamped manufacture date.

8. Donning Procedures:

Kneel and loop

Position yourself by kneeling on the floor, removing the unit from your belt, and placing it on the floor in front of you. Lay your hard hat on the floor with the light shining on the SCSR.

Open the unit by lifting the latch on top and removing the bottom and top covers. Quickly loop the neck strap over your head (leave the strap adjustment until you have isolated your lungs). Now you're ready to begin the 3 + 3 Donning Procedure.

1. Oxygen - Pull the large fluorescent orange oxygen actuator tag down to activate the oxygen.

2. Mouthpiece - Insert the mouthpiece.

3. Nosepiece - Pull the two nose pads apart and put the nosepiece on so that both nostrils are completely closed.

4. Goggles - Put on the safety goggles which are located in the bottom cover.

5. Straps - Adjust the neck strap so the SCSR hangs comfortably, with the canister resting on the chest. Proper adjustment can be checked by raising your head to look up. If you feel a pull on the mouthpiece, the unit is too low on your chest. Wrap the waist strap, which hangs from the bottom of the canister, around the waist and fasten it to the canister on the right side.

6. Replace the hard hat and move out.

Self-Rescuer Information Data Sheet

SELF-CONTAINED SELF-RESCUER		Sheet 1 of 2
1. **Company:** CSE	2. **Model No.:** AU-9A1	3. **Approval No.:** TC-13F-101

4. Daily Inspection:

Before each shift, if the unit is going to be carried, do the following:

1. If the unit rattles when shaken, remove from service.
2. Check lead seal. If broken or missing, remove from serviee.
3. Check security seal. If broken or missing, remove from service.
4. Check to make sure pressure gauge needle is in the green or yellow band area. If not, remove from service.
5. Check the carrying straps to see if they are broken, worn, or frayed. If broken, worn, or frayed, remove from service.
6. Check the case for indentations which may interfere with the pressure gauge reading, the valve assembly, or the absorption canister. If any are found, remove from service.
7. Check case for punctures. If any found, remove from service.
8. If the pressure gauge has been rotated and connot be viewed, remove from service.
9. If the unit shows physical abuse (crushed, burnt, visible holes, cracks, and/or dents), remove horn service.

5. 90-Day Inspection (for all units):

The same inspection procedures used for daily inspections apply for the 90-day inspections.

6. Conditions of Use:

1. The unit must meet the daily and 90-day inspections above.
2. It can be stored in a 14°F to 130° temperature range.
3. The unit should be used for escape only.
4. Any unit manufactured prior to March 11, 1985, must have been retrofittal with a vented regulator. Any Au-9A1 with an in-service date prior to March 11, 1985, should be removed from service immediately. The ir-service date should be determined from the security label on the unit.

Continuation Sheet

SCSR CSE AU-9A1	Sheet 2 of 2

7. Service Life Plan:

The approved service life plan requires all units currently employed in the field to be returned to the manufacturer for refurbishing. The units will receive a three-year extension with no unit permitted in service past December 31, 1995.

After the AU-9A1 has been refurbished, a security label is placed at the top of the unit. The label will show the serial number, lot number, date put in service, and the expiration date.

8. **Donning Procedures:**

1. Read Pressure - Check the pressure gauge. If the needle is in the yellow or green bands, there is sufficient oxygen available in the cylinder.
2. Lift Latch - Break the lead-wire seal by lifting the latch on the housing.
3. Unpack AU-9A1 - Remove and discard cover. Remove goggles located inside the housing and either suspend them around your arm, or place them in your hard hat. Unfold the breathing bag. Grasp the (tightly packed) breathing hose and extend fully from the bottom housing.
4. Open Valve - Open the oxygen cylinder valve by rotating the lever from the "DOWN" to the "UP" position.
5. Place Around Neck - Place the carrying strap over your head and around the neck, so the unit is positioned in front of you.
6. Adjust Carrying Strap - Raise the unit to your chest by loosening the strap clamp and pulling up on the end of the strap.
7. Center On Your Chest - Make sure unit is centered on your chest, suspended by the carrying strap around your neck.
8. Pull Mouthpiece Plug - Remove and discard the rubber plug from the mouthpiece. Exhale and hold your breath.
9. Insert Mouthpiece - Position the breathing hose head strap over your head and insert mouthpiece into your mouth.
10. Noseclamp - Attach the spring-loaded noseclamp to your nose so that your nostrils are completely closed and resume breathing normally through the mouthpiece.
11. Goggles - Put on the goggles and place your hard hat back on your head.
12. Adjust for Comfort - Readjust the length of the carrying strap so that the top of the unit's housing is four to six inches below your chin.
13. Tie Waist Straps - Tie the waist straps around your waist to prevent movement of the unit while you exit from the hazardous area.
14. Retreat Calmly - Keep calm and retreat from the danger area.

Chapter 2—Draeger

Self-Rescuer Information Data Sheet

SELF-CONTAINED SELF-RESCUER		Sheet 1 of 3
Company: Draeger	**2. Model No.:** OXY SR 60B	**3. Approval No.:** TC-13F-87

Daily Inspection:

Before each shift, if the unit is going to be carried, do the following:

1. The moisture indicator should be blue. If the indicator has turned pink, the device should be removed from service.
2. If the sealing clip is missing or damaged, the unit should be removed from senice.
3. If the metal clamp is missing or damagti, the unit should be removed from service.
4. If the outer housing shows cracks, visible punctures or other obvious physical damage, the unit should be removed from semice.

90-Day Inspection (for all units):

The same inspection procedures used for daily inspections apply for the 90-day inspections.

Conditions of Use:

1. The unit must meet the daily and 90-day inspections above.
2. Do not store at temperatures below 23°F or above 158°F. Do not use when unit has been precooled below 23°F.
3. The unit should be used for escape only.

Service Life Plan:

The service life of the OXY-SR 60B is limited. The expiration date is printed on the bottom case or the top lid of the device (seepage A-2-2).

After the lifetime extension tests, which are carried out by Draeger or a Draeger distributor, it is possible to reach a maximum service life of:

10 years for daily carried devices or for devices stored on vehicles, and

12 years for stored devices.

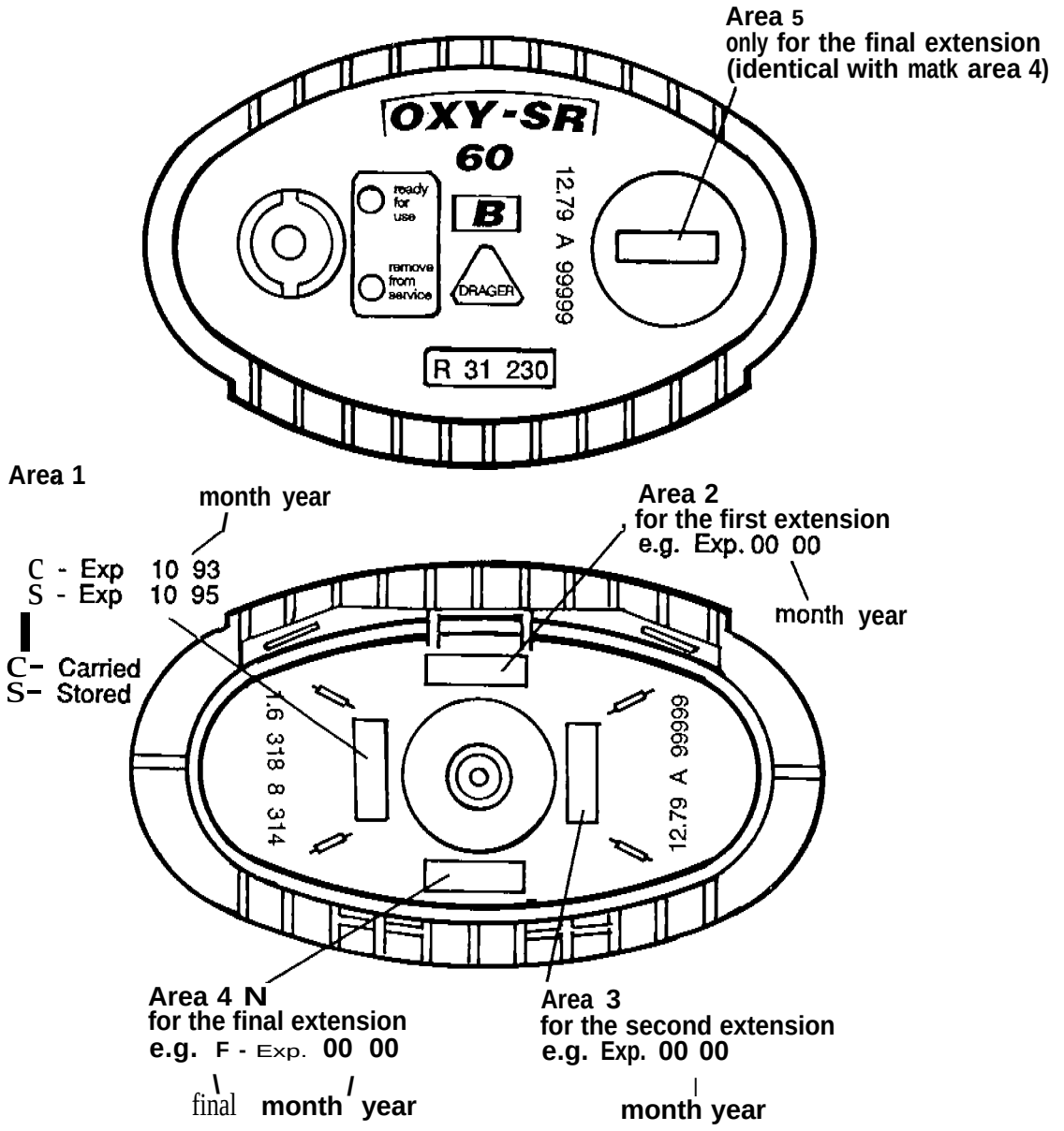
Before reaching the expiration date, Draeger or a Draeger distributor should be contacted to initiate measures for the necessary lifetime extension tests.

Continuation Sheet

SCSR DRAEGER OXY SR 60B

Expiration date marking/extension request

* The bottom case will be marked with the fwst expiration date (area 1).
* An extension is possible in accordance with the service life plan (areas 2 and 3).
* The final expiration date will be marked on the bottom case (ara 4) and on the top lid (area 5).



Continuation Sheet

SCSR DRAEGER OXY SR 60B	Sheet 3 of 3

8. Donning Procedures:

1. Place carrying strap over neck and position device on chest. Adjust strap so that the top of the rescuer is approximately 10 inches from your mouth.

2. Using the opening lever, break the soling clip, open the metal clamp and discard it.

3. Separate the upper half of the case until the split pin connected to the rip cord is completely out of the chlorate starter and throw it away.

4. Take the corrugated hose together with the mouthpiece out of the device. Check the corrugated hose for crimps. If the sides of the hose are crimped to the point that the inside walls are stuck together, massage it until it becomes loose.

5. Remove the plug from the mouthpiece, place the mouthpiece in your mouth and exhale.

6. Initially place goggles over arm.

7. Place the noseclip in position.

   NOTE: If the chlorate candle should fail to activate (bag fails to inflate after step 3) the rescuer can be activated manually by removing noseclip, inhaling though nose from ambient air, and exhaling into rescuer through mouthpiece or by removing mouthpiece, inhaling through mouth from ambient air, and exhaling into rescuer through mouthpiece. Repeat six to ten times, replace noseclip on nose or mouthpiece in mouth, and breathe normally.

8. Push goggles over head (after removing hard hat) and tighten straps on all sides until goggles are securely in position and gas tight.

9. Move device to final carrying position and place belt around waist. If necessary further aid unfolding of breathing bag.

10. Remain calm and escape from the mine.

Self-Rescuer Information Data Sheet

SELF-CONTAINED SELF-RESCUER		Sheet 1 of 3
1. **Company:** Draeger	**2. Model No.:** OXY K PLUS	**3. Approval No.:** TC-13F-289

4. Daily Inspection:

Before each shift, if a unit is going to be carried, do the following:

1. Check to make sure the red seal iss undamaged. If damaged, remove the unit from service.
2. If the lid is not closed, the unit should be removed from service.
3. If the housing reveals any cracks, holes, or other darnage deeper than 1.5 mm (.059 inch), the unit should be removed from service.
4. The color indicator should be deep blue. If more than 50 percent of the particles have changed their color from deep blue to light blue or clear, the unit should be removed from service.

5. 90-Day Inspection (for all units):

The same inspection procedures used for daily inspections apply for the 90-day inspections.

6. Conditions of Use:

1. The unit must meet the daily and 90-day inspections above.
2. Do not store at temperatures below 23°F or above 122°F. If stored above 122°F, return to Draeger for service.
3. Use only for escape from oxygen-deficient atmospheres.

Continuation Sheet

SCSR OXY K PLUS	Sheet 2 of 3

7. Service Life Plan:

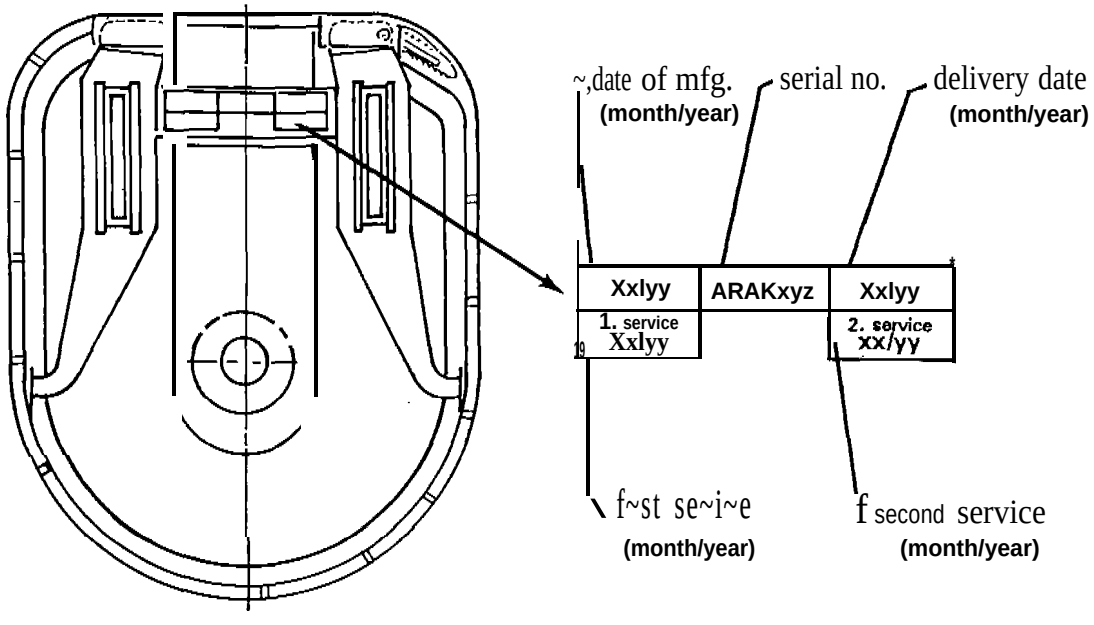
Carried 5 years Transported on a vehicle 5 years

After five years of being carried, if the operator wants an additional serviee life extension of five years maximum, the unit must be sent to Draeger, or an authorized Draeger service center, for refurbishment.

Storage life 10 years

The time difference between the manufacturing date and the delivery date shall not be more than 12 months.

L ocation of service dates



DATE	Who ia rqmsible for labeling	Which Date	Stllternent
Date of Mfg.	Dragenverk AG	Month and y= of Mfg.	NIA
Serial No.	Dragewerk AG	Number of Registration	NIA
Delivery Date	Distributor	Month atid y= of Delivery	Terminal end of service is date of delive~ +10 ywrs
1. Service	End user	Month and year of first Use +5 years (Date of removal from storage and placed in service +5 ywu%j	End of first service life (Max date = delivery date +10 years)
2. Service	Service Center	Month and year of refurbishment +5 years	Terminal end of service (Max date = delive~ date +10 years)

Continuation Sheet

SCSR OXY K PLUS	Sheet 3 of 3

8. Donning Procedures:

Opening the Container

. Lift the owning latch upwards.
. Remove the clamping strap completely.
. Rotate latch away from the body until the lid is released from the case.
• Pull lid away and discard.

Donning the Device

. Pull the housing shell upwards, whereby the device is released from the belt retainer which remains attached to the belt.
• Place red rubber neck pad over the head and around the neck.

The following steps have to be taken without interruption within approximately 20 seconds.

Preparing and Inserting the Mouthpiece

. Remove the breathing tube from the case and take the breathing hose up to your mouth. This action starts the oxygen production. The breathing bag will be filled within 1 to 2 minutes.
. Ensure that the breathing tube is not twisted or kinked.
. Remove the plug from the mouthpiece.
. Place the mouthpiece into your mouth so that it is positional between the teeth and lips.
. Enclose the mouthpiece tightly with your lips.

Positioning the Noseclip

. Pull nosedip apart and place it over the nostrils. The nose must be properly sealed.
• Support the unfolding of the brathing bag in cdd ambient temperature with your hands.

If the Breathing Bag has not Filled Properly

. Fill breathing bag with several (5 to 7) deep exhalations from the ambient ti. The humidity and the CO2 of the exhaled air will cause oxygen production to start.

Positioning the Unit

• Pull the nedstrap to position the unit in a comfortable position.
. Don the protective goggles. Adjust the goggles by pulling on the straps until a comfortable fit is achieved.
.Wrap the chest strap around the bcdy and tie off.
. Remove the belt support from the belt.

Self-Rescuer Information Data Sheet

FILTER SELF-RESCUER		Sheet 1 of 3
1. **Company:** Draeger	**2. Model No.:** 810	**3. Approval No.:** TC-14G-83

4. Daily Inspection:

Before each shift, if a unit is going to be carried, do the following:

1. The self-rescuer must be removed from the pouch.

2. The vacuum seal should be checked for tightness by grasping the bottom half of the self-rescuer in one hand and the top half in the other and twist in opposite directions. A weak seal will pop open and the unit should be removed from service.

5. 90-Day Inspection (for all units):

The same inspection procedura used for the daily inspections apply for the 90-day inspections.

6. Conditions of Use:

1. The unit must meet the daily and 90-day inspections above.

2. The unit is not suitable for use in atmospheres where the oxygen content is insufficient for human respiration. The unit should be used for escape only.

3. The 810 filter self-rescuer must be warn an the waist belt only. It cannot be stored on mining equipment.

7. Service Life Plan:

Model 810 FSRS produced prior to November 13, 1991, are maked with a batch number on the plastic tab on the top of the containers. The service life for these units is five yam from the date of manufacture. The date of manufacture can be determined by matching the batch number to the date of manufacture using the following list:

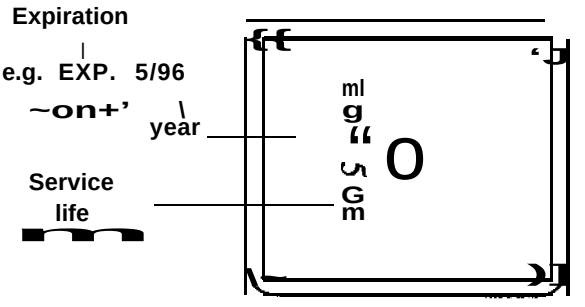
Continuation Sheet

FSR DRAEGER 810	Sheet 2 of 3

BATCH NUMBER	DATE OF MANUFACTURE
A03393 thru A05128	APR 1989
A05129 tbxu A05327	JUN 1989
A05328 thru A05717	OCT 1990
A05718 thru A06489	NOV 1990
A06490 thru A07091	MAY 1991
A07092 thru A07874	SEP 1991
A07875 thru A08136	NOV 1991

Any Model 810 FSR produced prior to November 13, 1991, that has a date of manufacture or batch number that does not correspond with the above numbers or the numbers are illegible is deemed to be out of date and no longer in approval condition.

The expiration date for units distributed after November 13, 1991, is printed on the bottom of the device. This date is inscribed by the manufacturer or authorized representative (not the mine operator) as shown in the diagram below. This date is the lesser of five years from the date distributed or six years from the date of manufacture.



Continuation Sheet

FSR DRAEGER 810	Sheet 3 of 3

8. Donning Procedures:

1. Lift the opening lever with the thumb. Pull back the opening lever with the thumb and index finger. The container cover can now be easily lifted off and thrown away.

2. Take the filter out of the container and then throw the container away.

   NOTE: Should it not be possible to remove the filter from the container, breathing can also be carried out through the self-rescuer in this way. The distance between the filter and the wall of the container has been made large enough to permit breathing.

3. Lift up the noseclamp, which lies in front of the mouthpiece. Insert the mouthpiece into the mouth; the lugs are held between the teeth.

4. Place the noseclamp on the nose to prevent breathing through the nose.

5. Remove your hard hat. Place the head band over the top and the back of your head. Finally, put the hard hat on your head and calmly escape from the mine.

Self-Rescuer Information Data Sheet

FILTER SELF-RESCUER		Shest 1 of 2
1. **Company:** Draeger	**2. Model No.:** 910	**3. Approval No.:** TC-14G-83

4. Daily Inspection:

Before each shift, if a unit is going to be carried, do the following:

The ease should be visually checked for external darnage (e.g., no dents in the case or darnage to the sealing are allowed).

5. 90-Day Inspection (for all units):

1. The weight of the FSR should be checked. Units which indicate a weight increase of more than 10 grams should be removed from service. The initial weight is embossed on the bottom of the container.

2. Any unit with broken seal or external damage should be removed from service.

b. **Conditions of Use:**

1. The unit must meet the daily and 90-day inspections above.

2. The unit is not suitable for use in atmospheres where the oxygen content is insufficient for human respiration. The unit should be used for escape only.

3. The 910 filter self-reseuer should be carried on the person. It cannot be stored on mining equipment.

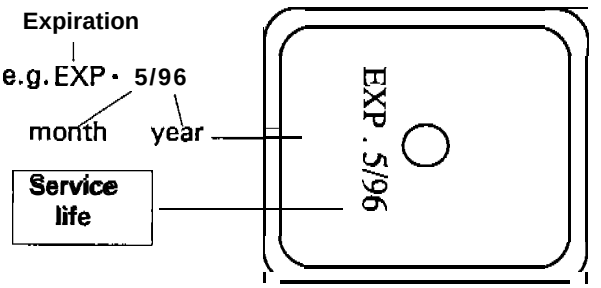
7. Service Life Plan:

Model 910 FSRS distributed prior to November 13, 1991, have the date of manufacture printed on the bottom of the device (e.g., 10.85 for October 1985). The service life for these units is five years from the date of manufacture. Therefore, add five years to the date of manufacture to determine if the unit has expircxl.

The expiration date for units distributed after November 13, 1991, is printed on the bottom of the device. This date is inscribed by the manufacturer or authorized representative (not the mine operator) as shown in the diagram below. This date is the lesser of five years from the date distributed or six years from the date of manufacture.

Continuation Sheet

FSR DRAEGER 910	Sheet 2 of 2



8. Donning Procedures:

1. Lift the opening lever with the thumb. Pull back the opening lever with the thumb and index finger. The container cover can now be easily lifted off and thrown away.

2. Take the filter out of the container and then throw the container away.

   NOTE: Should it not be possible to remove the falter from the container, breathing can also be carried out through the self-rescuer in this way. The distance between the filter and the wall of the container has been made large enough to permit breathing.

3. Lift up the nose-clamp, which lies in front of the mouthpiece. Insert the mouthpiece into the mouth; the lugs are held between the teeth.

4. Place the noseclamp on the nose to prevent breathing through the nose.

5. Remove your hard hat. Place the head band over the top and the back of your head. Finally, put the hard hat on your head and calmly escape from the mine.

Chapter 3–MSA

Self-Rescuer Information Data Sheet

SELF-CONTAINED SELF-RESCUER		Sheet 1 of 2
1. **Company:** MSA	2. **Model No.:** Portal-Pack™	3. **Approval No.:** TC-13F-283

4. Daily Inspection:

Before each shift, if the unit is going to be carried, do the following:

1. Check the two indicators on the apparatus, one on each cover. They indicate the readiness for use of the apparatus. When viewing the indicator, if they area blue color the apparatus is ready to use. If either indicator is pink, even with a small amount of blue remaining, the apparatus must be removed from serviee.
2. Visually inspect the case for darnage. Any visible damage to the seal area or visible puncture in the case should result in the unit being removed from serviee immediately.

5. 90-Day Inspection (for all units):

The same inspection procedures used for daily inspections apply for the 90-day inspections.

G. Conditions of Use:

1. The unit must meet the daily and 90-day inspections above.
2. Do not store at temperatures below -25°F or above 100°F . Short-term storage (less than 24 hours) must be limited to temperatures between 40°F and +130°F .
3. The unit should be used for escape only.
4. The date that mch unit or group of units is removed from storage above ground and intrwhmed into the mine environment for use or storage is the in-serviee date. The month and year of this date is to be permanently inscribed on the sealing band by the owner. The location of the in-service date is to be immediately after the ISD descriptor already present on the band. Any unit in service without an in-serviee date will be considered to have been placed in serviee on the date of manufacture.

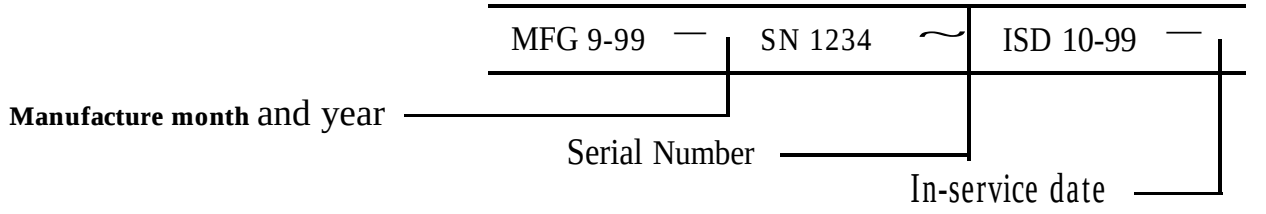
Continuation Sheet

SCSR MSA PORTAL-PACKTM	Sheet 2 of 2

7. Service Life Plan:

The MSA Portal-Pack™ has a total service life of 10 years. Of this, eight years maybe carried. The start of the carried life is to be the in-service date.

The date that each unit or group of units is removed from storage above ground and introduced into the mine environment for use or storage is the in-service date. The month and year of this date is to be permanently inscribed on the sealing band by the owner. The location of the in-service date is to be immediately after the ISD descriptor already present on the band as shown below.



Any unit in semice without an in-service date will be considered to have been placed in service on the date of manufacture.

8. Donning Procedures:

Kneel and loop

While in a kneeling position, place the Portal-Pack on the flmr in front of you. Remove your cap and lamp, and place it beside you so the light shines on the unit. Open the unit by lifting the lever on the side of the case. Remove the top and bottom covers and loop the neck strap over your head.

1. Grab canister with your right hand then grab the mouthpiece with your left hand and extend it fully. You will hear a "pop" sound; this action automatically fires the chlorate candle. Remove the mouthpiece plug before inserting mouthpiece.
2. Immediately insert the mouthpiece into your mouth and exhale into the unit. The flange of the mouthpiece goes between the teeth and the lips. Bite down on the two lugs extending into the mouth to hold the mouthpiece in plain.
3. Apply the noseclip to seal both nostrils. Breathe normally through your mouth.
4. Put on goggles which are located in the top cover. Adjust the neck strap for comfort and make sure there is no undue force pulling or pushing on the mouthpiece.
5. Grab the waist strap with your left hand and wrap it around yourself. Fasten the buckle on your right side and adjust for comfort.
6. Replace your cap md lamp and calmly return to fresh air.

Self-Rescuer Information Data Sheet

SELF-CONTAINED SELF-RESCUER		Sheet 1 of 3
1. **Company:** MSA	**2. Model No.:** SCSR-60	**3. Approval No.:** TC-13F-78

4. Daily Inspection:

Before each shift, if the unit is going to be carried do the following:

1. Visually inspect for external damage at the seal area or any punctures to the case. If found, remove from service.
2. Check units with moisture indicators to ensure indicators are blue. Any unit in which the indicator has started to change to pink should be removed from service even if there is a small amount of blue remaining.
3. Any unit with damage to the external case in the form of dents 1/2 inch or deeper should be removed from service.
4. Any unit with minor visible darnage must be tested for leakage of the case as soon as possible. Typical minor damage is:
   - dents in case less than 1/2 inch deep
   - slight dent in wireform, band, or flange
   - gasket chipped, tom, or abraded
   - welded hardware bent or deformed
   - abraded areas on ease.
5. No unit which has had the sealing band completely removed shall be leak tested. Remove these units from service.
6. If there has been disturbance of one or two links of the seal band spring but the seal still appears to be intact, the unit should first be subjected to a leak test. If there is a leak, it should be removed from service. If no leak is found, the loose links maybe replaced, the unit re-tested to ensure no seal disturbance has occurred, and if still leak-free return to service.
7. Neck and waist straps must be maintained and available for use on each apparatus.
8. Nonindicator units that are carried shall be tested with a dry leak tester or the hot water immersion test.

5. 90-Day Inspection (for all units):

The same procedures used for the daily inspection apply for the 90-day inspection. In addition, units without moisture indicators must be tested with dry leak tester.

Continuation Sheet

SCSR MSA SCSR-60

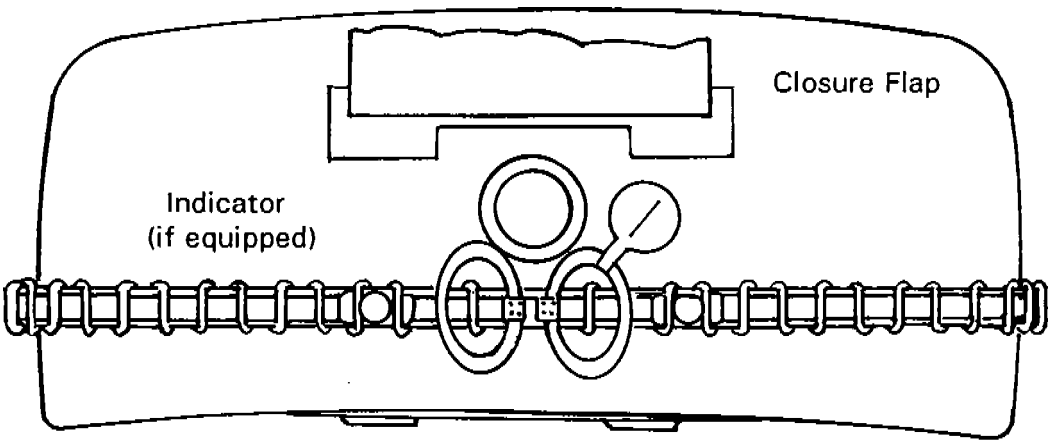
6. Conditions of Use:

1. The unit must meet the daily and 90-day inspections above.
2. Do not store at tem~ratures below 10°F or above I(K)°F.
3. The unit should be used for escape only.
4. Units which have been carried shall be leak tested before being placed into storage (cached).
5. The unit must be equipped with weight program tag.

7. Service Life Plan:

The MSA SCSR-60 has a total service life of 11 years. A unit must be discarded 11 years after the month and year of manufacture which should be located on the weight program tag.

View from Top of Rescuer



Pull Ring

Inspection tag, ready for insertion through closure flap hole

Continuation Sheet

SCSR MSA SCSR-60 Sheet 2 of 3

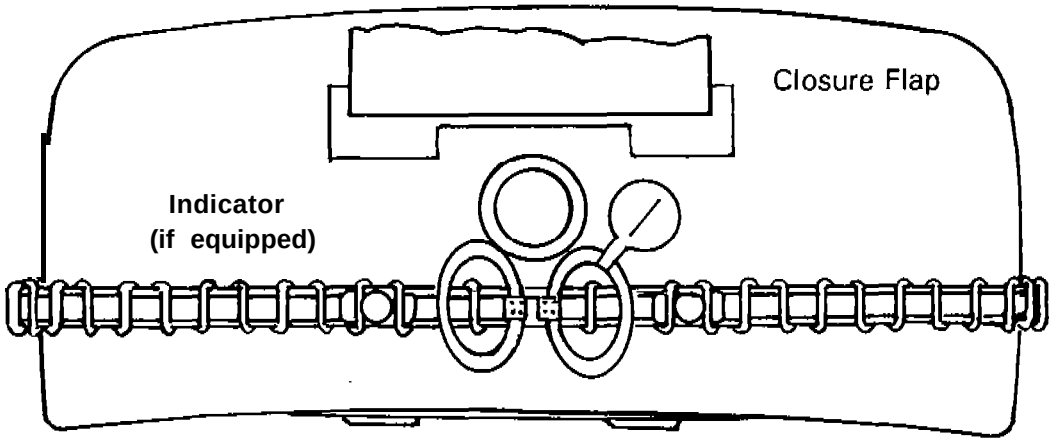
6. Conditions of Use:

1. The unit must meet the daily and 90-day inspections above.
2. Do not store at temperatures below 100F or above 100”F.
3. The unit should be used for escape only.
4, Units which have been carried shall be leak tested before being placed into storage (cached).
5. The unit must be equipped with weight program tag.

7. Service Life Plan:

The MSA SCSR-60 has a total service life of 11 years. A unit must be discarded 11 years after the month and year of manufacture which should be located on the weight program tag.

View from Top of Rescuer



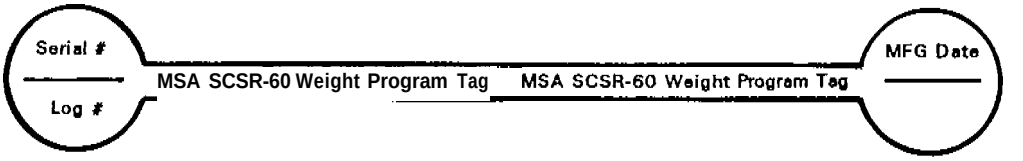
Pull Ring

Inspection tag, ready for insertion through closure flap hole

Continuation Sheet

SCSR MSA SCSR-60	Sheet 3 of 3

Weight Program Tag



8. Donning Procedures:

1. Move unit to chest. Position thicker portion of case facing away from the body. Loosen waist strap slightly and place the long strap over the head and around the neck. Adjust neck straps at both ends simultaneously so top of unit is approximately six inches from mouth when head is level.

2. Lift cover tab to expose pull rings.

3. Pull both rings simultaneously. Pull up and to each side allowing wire forms and bumper to come free.

4. Remove wire forms all around unit. Pull until wire forms come together at bottom of unit.

5. Pull wire down to separate gasket from case at the bottom to vent any vacuum in case.

6. Grasp cover tab, pull case top off, and discard case top with gasket and wire forms.

7. Unfold breathing bags so they extend out on each side.

8. Grasp pull-ring at mouthbit and pull firmly but gently directly out away from chest. The unit is activated by this pull.

   NOTE: Check that the pull cord is fully extended.

9. Immediately put mouthbit into mouth. Insert one side of mouthbit at a time. The flange of the mouthbit goes between the teeth and the lips. Bite down on the two lugs extending into the mouth.

10. Apply the noseclip so it seals both nostrils.

11. Breathe normally, remain calm, and escape to fresh air. Tighten waist strap as you escape.

Self"Rescuer Information Data Sheet

FILTER SELF-RESCUER		Sheet 1 of 4
1. Company: MSA	2. Model No.: W65	3. Approval No.: TC-14G-82

4. Daily Inspection:

Before each shift, if a unit is going to be carried do the following:

1. Check the solder seal for the red lever; if broken or missing, discard the unit.
2. Visually check the case for damage. Any dent or abrasion that may have produced a hole or crack should be checked for airtightness by weighing the self-rescuer to the nearest whole gram. Discard unit if it has increased more than 10 grams from the as-shipped weight marked on the bottom of the unit. Some holes or cracks can be detected by immersing the self-rescuer in warm water and looking for escaping air bubbles. Discard the unit if any bubbles are seen.
3. If the as-shipped weight is illegible or missing, discard the unit.

5. 90-Day Inspection (for all units):

Part 75. 1714-3(c) requires a unit to be weighed at intervals not exceeding 90 days. Any unit that weighs more than 10 grams over its original weight shall be removed from service.

In addition, the self-rescuer should be checked for the applicable discard conditions outlined below.

Discard Conditions With In-Service Date

If an in-service date is marked on the case bottom, then the unit must be discarded when:

1. the date of manufacture is illegible, or
2. fifteen (15) years have elapsed from the date of manufacture, or
3. ten (10) years have elapsed since the in-service date, or
4. the original weight is illegible, or
5. unit fails one of the two airtightness tests (weight gain or immersion) as described in the daily inspection section, or
6. solder seal for red lever is broken or missing.

Discard Conditions Without In-Service Date

If the unit has been placed into service and no in-service date is marked on the case bottom, or it is illegible, then the unit must be discarded when:

1. the date of manufacture is illegible, or
2. ten (10) years have elapsed from the date of manufacture, or

FSR MSA W65	Sheet **2** of 4

3. the original weight is illegible, or

4. unit fails one of the two airtightness tests (weight gain or immersion) as described in the daily inspection section, or

5. solder seal for red lever is broken or missing.

6. Conditions of Use:

1. The unit must meet the daily and 90-day inspections above.

2. Never use the respirator for other than escape through areas containing carbon monoxide in otherwise breathable air; do not use it for exploration surveys or normal working activities. The unit should be used for escape only.

3. Date marking must be done with a manual or electric scribe type tool. Do not use impact type dies that require the use of a hammer to deform the material. This may damage the unit or produce a hole in the case.

7. Service Life Plan:

TOTAL LIFE

The W65 FSR has been granted a maximum total life of 15 years, with an in-service life limited to 10 years. Total life is the time period from the date the unit is manufactured to the date the unit must be discarded. In-service life starts when the unit is placed in an underground mine for use or storage and continues until it must be discarded.

In order to efficiently utilize the in-service life, the in-service date must be marked on the case bottom. If no in-service date is marked, the date of manufacture serves as the in-service date.

W65 FSRs manufactured prior to 1992 do not have a date of manufacture etched into the case. The date of manufacture is easily determined through the use of the following cross-reference.

If a serial number begins with one letter followed by a number, it has exceeded its service life and must be removal from service. The date of manufacture for serial numbers with two letters followed by a number can be identified by the following list:

Continuation Sheet

FSR MSA W65	Sheet 3 of 4

Serial No.	Year of Mfg.	Serial No.	Year of Mfg.
AA through AZ	Prior to 1977	CP through CR	1985
BA through BF	1978	CS through CU	1986
BG through BO	1979	CV	1987
BP through BT	1980	CW through CY	1988
BU through BZ	1981	CZ and DA through DD	1989
CA through CG	1982	DE through DH	1990
CH through CK	1983	DI through DM	1991
CL through CO	1984	DN through DO	1992

After 1992, all W65S will be marled with the date of manufacture.

Units with the following serial numbers must be removed from service if they were not retrofitted by MSA. Units with these serial numbers that have been retrofitted can be identified by the letter "T" in front of the original weight. The letter was placed on the bottom of the unit by MSA.

Serial No.	Serial No.
CJ 7201 through CJ 9500	CP 1591 through CP 2090
CL 8591 through CL 8810	CP 2091 through CP 3700
CM 1143 through CM 1590	CP 3903 through CP 4590
CM 2401 through CM 2700	CP 4591 through CP 5340
CM 9326 through CM 9590	CP 6361 through CP 7833
CM 9591 through CN 0090	CQ 0001 through CQ 0090
CN 0091 through CN 3300	CQ 0091 through CQ 0300
CN 3327 through CN 4590	CQ 0814 through CQ 1590
CN 4591 through CN 4600	CQ 1591 through CQ 2090
CN 4702 through CN 6700	CQ 2091 through CQ 2590
CN 7711 through CN 8090	CQ 2591 through CQ 2930
CN 8091 through CN 9799	CQ 4972 through CQ 9090
CN 9903 through CO 0590	CQ 9091 through CQ 9900
CO 0591 through CO 2100	CR 0208 through CR 1917
CO 2202 through CO 3000	CR 2431 through CR 3590
CO 8091 through CO 8590	

Continuation Sheet

FSR MSA W65	Sheet 4 of 4

8. Donning Procedures:

1. If the protective boot is covering the device, remove it.

2. Release the locking device by pressing the thumb under the red release lever and pushing up until the canister seal is broken.

3. Grip the red release lever between thumb and forefinger and pull up hard. This should break the seal and loosen the cover.

4. Remove the cover from the container and discard it.

5. Grip the head harness of the respirator and pull the respirator out of the container.

   NOTE: If it is not possible to remove the respirator from the container, the wearer can still breathe with the filter in the container.

6. Pull the noseclip away from the mouthpiece.

7. Insert mouthpiece lugs into mouth, bite the lugs firmly and close lips tightly around the mouthpiece.

8. Pull the pads of the noseclip apart and position pads over the nostrils to seal the nasal passage.

9. Remove hard hat and pull the head harness over the head. The lower strap should be behind the head and the upper band should be placed above the forehead.

10. Remain calm, breathe normally, and escape to fresh air.

Chapter 4 -Ocenco

Page

Self-Contained Self-Rescuer

OCENCO

Self-Rescuer Information Data Sheet

SELF-CONTAINED SELF-RESCUER		Sheet 1 of **4**
1. **Company:** Ocenco	**2. Model No.:** EBA 6.5	**3. Approval No.:** TC-13F-104

4. Daily Inspection:

Before each shift, if the unit is going to be carried, do the following:

1. Check the oxygen pressure gauge. The pressure gauge reading is normally 2500 to 3000 psi at 70°F. Remove from service if below 2500 psi at 70°F. At no time should the gauge reading be below 2100 psi. If the case is damaged and the gauge cannot be read, the unit must be removed from service.

2. Make sure that all the latch seals are not broken. Two seals are provided-one for each band. A third seal on the release rod is optional. If all three seals are opened, remove the unit from service. Some users wish to maintain all seals. For this purpose, Ocenco, Incorporated, provides replacement seals with a green logo. To ensure that the SCSR has not been opened, only two of the three seals maybe green.

3. Inspect the apparatus for indications of high force impacts. If the view through the case is obstructed such that a proper examination cannot be performed (e.g., scuff marks, stickers, paint) the unit must be removed from service. Indications of high force impacts are listed below. If any of these signs are present, the unit must be removed from service.

   a. Case cracked, burned or deformed.

   b. "U" seal opened or rolled.

   c. Loose parts:
      - Bottle strap (stainless steel) loose
      - Scrubber canister not in mounts
      - Screws or inserts loose
      - On/Off valve positioned toward base

   d. Bottle pad (red rubber) cut or displaced

   e. Pressure gauge bent or indicator needle broken.

   f. Scrubber mounts bent.

   g. Scrubber canister dented.

   h. Dirt, debris, or moisture inside case.

   i. Handle loops broken.

4. Make sure that the yellow mouthpiece plug is in the mouthpiece. Remove the unit from service if the plug is removed.

Continuation Sheet

SCSR OCENCO EBA 6.5	Sheet 2 of 4

5. 90-Day Inspection: (for all units):

The same inspection procedures used for daily inspections apply for the 90-day inspections.

6. Conditions of Use:

1. The unit must meet the daily and 90-day inspections above.
2. The maximum storage temperature is 140% for short periods; the minimum is 10°F.
3. The unit should be used for escape only.
4. In order for the EBA 6.5 to be considered "stored" it should be stored in a fully enclosed container. The interior of the container should be lined with foam rubber or other shock absorbing material. The fit between the EBA 6.5 and foam should be snug to prevent motion but still allow easy removal.

7. Service Life Plan:

The Ocenco, Incorporated, EBA 6.5 SCSR is designed for a service life of 15 years.

Ocenco, Incorporated, determined that the Mandatory Factory Service action shall occur 10 years from the date of manufacture or factory service if the units have been stored, not worn and carried, and five years from the date of manufacture or factory service if the units have been worn or carried. The end-of-service life for the EBA 6.5 is 15 years from the date of manufacture regardless of the deployment method. In order for the EBA 6.5 to be considered “stored,” it should be stored in a fully enclosed container. The interior of the container should be lined with foam rubber or other shock absorbing material. The fit between the EEA 6.5 and foam should be snug to prevent motion but still allow easy removal.

In order to determine the next Mandatory Factory Service date of units manufactured prior to October 1991, it is necessary to determine the manufacturing date or factory service date and add five years if worn or carried, add 10 years if stored, and remove from service if over 15 years from the date of manufacture.

Ocenco, Incorporated, EBA 6.5s manufactured prior to October 1991 carry one or both of the following dates:

1. A date/serial number label on the base.

If this number starts with a single numeric digit followed by a single letter, they represent the 1980s decade year and month as illustrated in the following examples:

a. 2B123456 was manufactured in 1982 (2) in the month of February (B).

b. 3K654321 was manufactured in 1983 (3) in the month of November (K).

The following chart can be used to determine the month:

Letter	Month	Letter	Month
A	January	G	July
B	February	H	August
c	March	I	September
D	April	J	October
E	May	K	November
F	June	L	December

If the number consists of only numeric digits, the first two digits represent the year and the second two digits represent the month as illustrated in the following examples:

a. 90031234 was manufactured in 1990 (90) in the month of March (03).

b. 91084321 was manufactured in 1991 (91) in the month of August (08).

2. A factory service label on the cover.

This label has the month and year the unit was serviced (example: APR '91).

Ocenco, Incorporated, EBA 6.5s manufactured or serviced after October 1991 are given three dates: (1) the original date of manufacture; (2) a date five years from the date of manufacture or service, at which time a Mandatory Factory Service must be performed if the unit has been worn or carried; and (3) a date 10 years from the date of manufacture or service, at which time the Mandatory Factory Service must be performed if the unit is stored.

The end-of-service life is 15 years from the date of manufacture. If the end-of-service date occurs before the 10-year stored service date, the stored service date will be reduced to the end-of-service life date. If the end-of-service life date occurs before the five-year carried service date, the carried service date and the stored service date will be reduced to the end-of-service life date.

Continuation Sheet

SCSR OCENCO EBA 6.5	Sheet 4 of 4

8. Donning Procedures

1. Pull latch release rod.
2. Lift and pull each latch ring to release bands.
3. Remove cover from base, discard cover and rubber seal.
4. Open oxygen valve fully counterclockwise
5. Place neck strap over head.
6. Pull mouthpiece toward face. The mouthpiece plug will automatically be removed from the mouthpiece. Insert mouthpiece and breathe through mouth only. Use head strap for additional support of mouthpiece, if required.
7. Apply noseclip to nose
8. Purge bag with oxygen to eliminate nitrogen: exhale, hold breath and deflate back by pressing on the bag. Inhale deeply through the mouthpiece, then breathe normally.
9. Adjust neck strap for comfort.
10. Wrap waist harness around waist, clip and adjust for fit by pulling on strap end.
11. Place goggles over eyes.
12. Remain calm, breathe normally and escape to fresh air.

Self-Rescuer Information Data Sheet

SELF-CONTAINED SELF-RESCUER		Sheet 1 of 3
1. **Company:** Ocenco	**2. Model No.:** M-20	**3. Approval No.:** TC-13F-269

4. Daily Inspection:

Before each shift, if a unit is going to be carried, do the following:

1. Check the gauge. The pointed white indicator on the gauge is normally in the green. Remove the M-20 from service if the white gauge indicator is in the red. If the case is damaged and the gauge cannot be read, the unit must be removed from service. If the view through the gauge window is obstructed for any reason, such that a proper examination cannot be performed (e.g., scuff marks, stickers, paint), the M-20 must be removed from service. The round white dot on the gauge is the zero pressure mark.
2. Inspect the apparatus for indications of high force impacts. Indications of high force impacts are listed below. If any of these signs are present, the M-20 must be removed from service:
   a. Case cracked, burned, deformed, or excessively worn.
   b. Excessive gap between cover and base. (This is an indication that the unit has been opened and reclosed.)
   c. Damaged latch or cover band. Severe dents or wear spots in the band or the band is out of position.
   d. Gauge bent or white indicator needle broken.
   e. Dirt, debris, or moisture visible through gauge window.
   f. Belt loops broken. A cracked belt loop is an indication of a severe impact while off the belt.

If the M-20 fails any of the above inspections, it should be removed from service.

5. 90-Day Inspection (for all units):

The same inspection procedures used for daily inspections apply for the 90-day inspections.

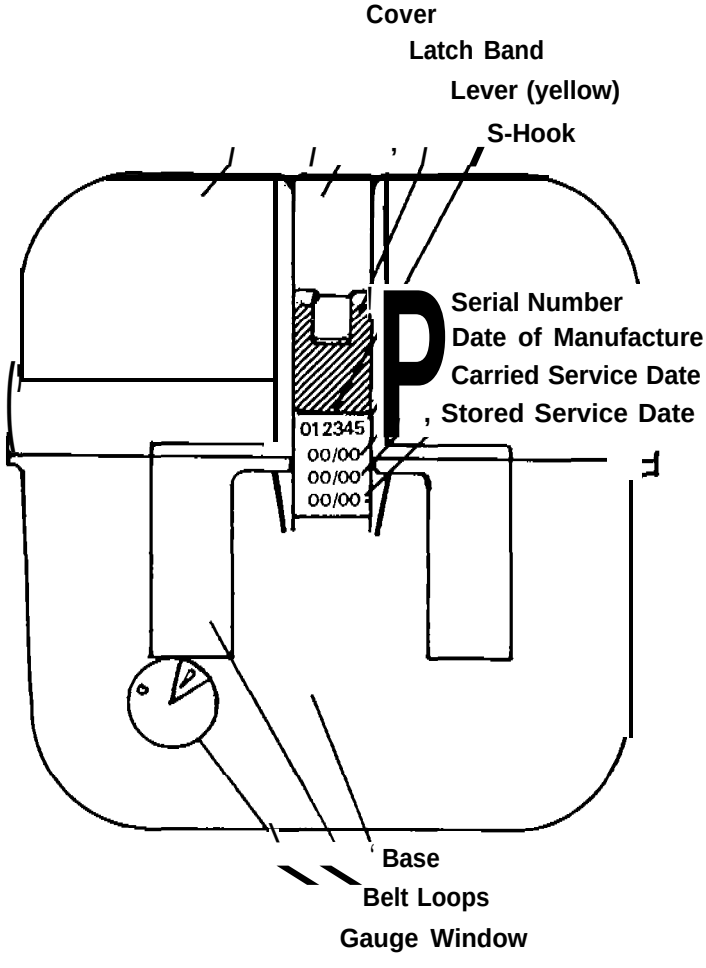
6. **Conditions of Use:**

1. The unit must meet the daily and 90-day inspections above.
2. The maximum storage temperature is 140%, the minimum is 10%. These temperatures may be exceeded for short periods without adversely affecting the unit.
3. The unit should be used for escape only.
4. In order for the M-20 to be considered "stored," it should be stored in a fully enclosed container. The interior of the container should be lined with foam rubber or other shock absorbing material. The fit between the M-20 and foam should be snug to prevent motion but still allow easy removal.

7. Service Life Plan:

The service life of the M-20 is 15 years from the date of manufacture. If a unit is stored, it must be sent to Ocenco for Mandatory Factory Service after 10 years. If the unit is worn or carried, it must be sent to Ocenco for service after five years. In order for the M-20 to be considered "stored" it should be stroed in a fully enclosed container. The interior of the container should be lined with foam rubber or other shock absorbing material. The fit between the M-20 and foam should be snug to prevent motion but still allow easy removal.

The M-20s are given three dates: (1) the original date of manufacture; (2) a date five years from the date of manufacture or service, at which time a Mandatory Factory Service must be performed if the unit has been worn or carried; and (3) a date 10 years from the date of manufacture or service, at which time the Mandatory Factory Service must be performed if the unit is stored. These dates can be found as indicated on the diagram below:



Continuation Sheet

SCSR OCENCO M-20	Sheet 3 of 3

The end-of-service life is 15 years from the date of manufacture. If the end-of-service date occurs before the 10-year stored service date, the stored service date will be reduced to the end-of-service life date. If the end-of-service life date occurs before the five-year carried service date, the carried service date and the stroed service date will be reduced to the end-of-service life date.

8. **Donning Procedures:**

1. Release yellow lever and discard cover.

2. Remove unit by pulling yellow neck strap upward.

3. Insert yellow mouthpiece.

4. Fit yellow noseclip.

5. Fit and adjust yellow neck strap.

6. Breathe through mouth and escape.